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**WO 2003/101281 A3**

## (54) Title: METHOD FOR REDUCING OBSTRUCTIVE HYDROCEPHALUS

(57) Abstract: A process for reducing cerebrospinal fluid flow obstruction includes the administration of a therapeutic dose of a clot-reducing agent to a subject having preconditions or obstructive hydrocephalus symptoms. The dose is maintained within the subject for a period of time sufficient to reduce cerebrospinal fluid flow obstruction. The clot-reducing agent includes a plasminogen activator, a defibrinogenic agent, an anticoagulant, a platelet inhibitor and a combination thereof. A commercial kit is provided, containing a clot-reducing agent, an administering apparatus, together with instructions for use of the kit.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/17271

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61K 38/43

US CL : 424/94.1, 94.64, ; 514/165

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/94.1, 94.64, ; 514/165

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/0045847 A1 (BORGESEN) 18 April 2002 (18.04.2002), entire document	1-38
A, P	US 2003/0059476 A1 (WANG) 27 March 2003 (27.03.2003), entire document	1- 38
A	US 2002/0160001 A1 (NIKLASON et al) 31 October 2002 (31.10.2002), entire document	1-38

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"B" earlier application or patent published on or after the international filing date

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"&" document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US03/17271

### Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claim Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claim Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest     The additional search fees were accompanied by the applicant's protest.  
                             No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

PCT/US03/172

**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1 - 25, 36 and 38, drawn to a process for reducing cerebrospinal fluid flow obstruction.

Group II, claim(s) 26 - 35 and 37, drawn to a kit.

The inventions listed as Groups I - II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the claims do not contain a special technical feature which contributes over the prior art. Specifically, kits comprising heparin (a clot reducing agent) are known and described in the art (see US 6146874 A).

**Continuation of B. FIELDS SEARCHED Item 3:**

WEST, PubMed, CAS-STN

search terms: cerebrospinal fluid obstruction, hydrocephalus, catheter, plasminogen, platelet, thrombin, heparin, aspirin, streptokinase, anticoagulant